

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-017919**Date Inspected:** 06-Nov-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

CWI Inspectors: ZPMC: Mr. Lv Li Qing, Mr. Li Yan Hua

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG Bay 13

This QA Inspector observed ZPMC welder 062782 used flux cored welding procedure WPS-B-T-2233-TC-U5-F to make OBG segment 14AE grillage weld SA7038-030. This QA Inspector measured a welding current of approximately 210 amps and 25.5 volts. This QA Inspector observed the base materials were heated with electric heaters to preheat and maintain the base material temperature of this weld joint. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Li Shoufu stencil 066674 used flux cored welding procedure WPS-B-T-2233-TC-U5-F to make OBG segment 14AE grillage weld SA7038-044. This QA Inspector measured a welding current of approximately 245 amps and 26.5 volts. This QA Inspector observed that the maximum welding current in the WPS is 275 amps and that Mr. Li Shoufu has a welding current that is approximately 15 amps above this maximum limit. ZPMC QC Inspector Mr. Lv Li Qing agreed the welding current is above the maximum and Mr. Lv Li Qing adjusted the welding current to approximately 220 amps. This QA Inspector

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observed the base materials were heated with electric heaters to preheat and maintain the base material temperature of this weld joint. Following adjustment of the welding current, items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Ye Bing stencil 066733 used flux cored welding procedure WPS-B-T-2233-TC-U5-F to make OBG segment 14AE grillage weld SA7038-058. This QA Inspector measured a welding current of approximately 215 amps and 26.0 volts. This QA Inspector observed Mr. Ye Bing appeared to be certified to make this weld and the base materials were heated with electric heaters to preheat and maintain the base material temperature of this weld joint. Items observed on this date appeared to generally comply with applicable contract documents.

OBG Bay 14

This QA Inspector observed ZPMC welder Mr. Wang Li, stencil 044772 used shielded metal arc welding procedure specification WPS-B-P-2313-TC-P5-FCM to make OBG segment 13AE weld SEG3007AU-097. This weld joins a stiffener plate to a floor beam near panel point PP119. This QA Inspector observed ZPMC CWI Mr. Lv Li Qing has recorded a welding current of approximately 150 amps that Mr. Wang Li appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wang Jinjiu stencil 043661 used shielded metal arc welding procedure specification WPS-B-P-2313-TC-P5-FCM to make OBG segment 13AE weld SEG3007AU-097. This weld joins a stiffener plate to a floor beam near panel point PP119. This QA Inspector observed ZPMC CWI Mr. Lv Li Qing has recorded a welding current of approximately 150 amps that Mr. Wang Jinjiu appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC personnel performed heat straightening of OBG segment 14E weld SEG3020AQ-026. These welds join plates AP3519 and AP3003. ZPMC has issued heat straightening document HSR #9697 for this activity. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Xu Fubao, stencil 200569 used shielded metal arc welding procedure specification WPS-B-P-2211-B-U2-FCM-1 to complete tack welds between OBG segment 13BW deck plate DP3137-001(PL333A and PL333B) groove weld. This QA Inspector observed Mr. Xu Fubao appeared to be certified to make this weld and the base materials were preheated prior to welding. This QA Inspector measured a welding current of approximately 150 amps. Items observed on this date appeared to generally comply with applicable contract documents.

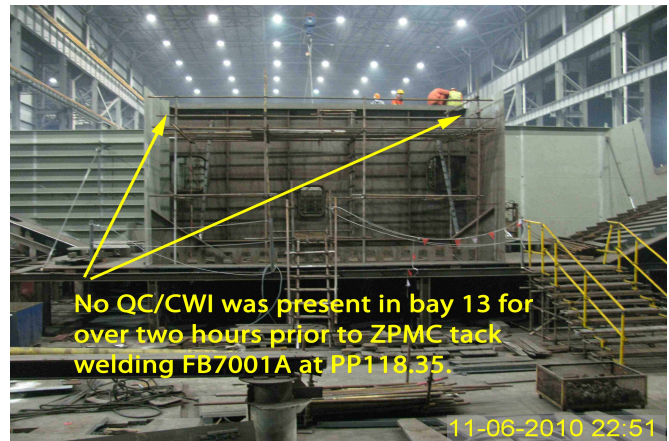
This QA Inspector issued an incident report for the following:

ZPMC welder 251281 used the SMAW process to perform tack welding of temporary plates to OBG segment 13AE, FB7001A without an approved Certified Welding Inspector (CWI) present. This QA Inspector was present in OBG 13AE from 2200 hrs to 2330 hours, during which time no Certified Welding Inspector was present. This QA notified ZPMC CWI Mr. Lv Li Qing who was performing CWI duties in bay 13 that ZPMC personnel had performing welding of FB7001A in bay 14 without any CWI being present. ZPMC CWI Mr. Lv Li Qing stated he

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had not performed any weld monitoring in bay 14 after 2200 hours because he had not been informed any welding of OBG segment 13 would be taking place after 2200 hours. See the photographs below for additional information.



Summary of Conversations:

See Above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact James Devy +8615000026784, who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer
